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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,756	09/17/2001	Ulrich Stieler	02365	8945
987	7590	11/23/2004	EXAMINER	
SALTER & MICHAELSON THE HERITAGE BUILDING 321 SOUTH MAIN STREET PROVIDENCE, RI 029037128			KUHN, ALLAN R	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/936,756

Applicant(s)

STIELER, ULRICH

Examiner

Allan Kuhns

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2004 and 13 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-16 and 19-25 is/are rejected.
- 7) ☒ Claim(s) 4, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

1. Claims 21-22 and 24-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims are indefinite because it is unclear as to what "its holding pressure" in claims 21 and 24-25 refers. Clarification is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-16, 19-20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckardt et al. (5,093,053) as set forth in the previous Office action.

4. Claims 21-22 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendry et al. (4,824,732). Hendry et al. disclose or suggest the basic claimed device for the discontinuous metered or measured addition of physical propellants to a foamable melt including a storage means or holding chamber in which the propellant is stored under pressure, a pressure control valve for regulating the propellant pressure, an injection point (it is submitted that the line downstream of cylinder 21 acts as a throttling means) at which propellant pressure is fed to the melt, a wherein a controlled closure mechanism is provided at the injection point (note valve 22). Hendry et al. appears not to state that the closure mechanism opens upon an

increase in pressure above its holding pressure, but this is directed to a method of operation of the device, rather than the structure of the device, the structure now being evaluated.

The referring to claim 1 in new claim 25 is taken by the examiner as a statement of an intended use for the device. Hendry et al. teach the inclusion of a relief valve (37) in the device, as in claims 22 and 24, at column 4, lines 36-37.

5. Claims 4 and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Applicant's arguments filed July 6 and September 13, 2004 have been fully considered but they are not persuasive. With regard to claim 1, applicant states that (in the instantly claimed process) the physical expanding agent is added to the melt in a very specific way such that the pressure during the injection phase is higher than the pressure which is exerted on the expanding agent in the phases between or before or after addition. Applicant then argues that Eckardt fails to provide any motivation for one of skill in the art to add a physical expanding agent as claimed. This is not persuasive because the pressure on the expanding agent in Eckardt is certainly lower after addition in order that the layer B can expand.

Applicant also argues, with regard to claim 2, that Eckardt is silent on the nature of any physical expanding agent. The examiner disagrees because this reference teaches at column 4, line 9, for example, that a gaseous expanding agent may be used and such gas is a compressible fluid. Applicant also argues, concerning claim 3, that

there is no disclosure in Eckardt to maintain the expanding agent under pressure in an intermediate cycle time before and after the injection phase. The examiner disagrees because one of ordinary skill in the art would recognize that the expanding agent must attain a relatively high pressure before injection in order that it can successfully be added to the melt, and Eckardt et al. teach or suggest maintaining pressure after the injection phase by teaching that additional gas C is introduced, which actually exceeds the pressure of the expanding agent (column 5, lines 26-28).

Applicant's arguments concerning the Johnson reference are considered to be moot by the examiner based on the revised ground of rejection introduced in this Office action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Kuhns whose telephone number is (571) 272-1202. The examiner can normally be reached on Monday to Thursday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianne, can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Allen R. Kuhns*  
ALLAN R. KUHNS  
PRIMARY EXAMINER AU 1732  
11-18-04